BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

MIKE GLEASON, Chairman
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JEFF HATCH-MILLER
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IN THE MATTER OF THE APPLICATION OF CHAPARRAL CITY WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.

DOCKET NO. W-02113A-04-0616

On remand from the Arizona Court of Appeals, No. 1 CA-CC 05-0002

STAFF'S CLOSING BRIEF REMAND PROCEEDING

On August 24, 2004, Chaparral City Water Company ("Chaparral City" or "Company") filed an application for an increase in rates. In that proceeding, the Company asked for an increase in revenues of $1,773,091, a 28.59 percent increase. By contrast, Staff recommended a revenue increase of $809,692, a 13.05 percent increase. On September 30, 2005, the Commission issued Decision No. 68176, which granted the Company an increase in revenues of $1,107,620, an increase of 17.86 percent.

Thereafter, the Company appealed the Commission's decision to the Arizona Court of Appeals, asserting primarily that the Commission had not used the Company's fair value rate base ("FVRB") when determining its rates. The Court of Appeals agreed with the Company, in part, and remanded the case to the Commission. The hearing on that remand was held on January 28 and 29, 2008. Arizona Corporation Commission Staff ("Staff") hereby files its Closing Brief in that remand proceeding.

I. BACKGROUND.

As a hearing on remand from the Court of Appeals, this case is, in some respects, the finishing chapter to the Company's last rate case. Accordingly, there are certain aspects of that case that frame the issues to be addressed in this proceeding.

A. <u>In That Proceeding, The Commission Rejected The Company's Proposed Methodology For Determining The Fair Value Rate Of Return.</u>

In the rate case, the Company suggested that the Commission adopt 8.2 as the fair value rate of return ("FVROR").[1] Under this proposal, the Company suggested using its recommended weighted average cost of capital ("WACC") as its FVROR. In evaluating these issues, the Commission rejected the Company's proposed WACC of 8.2 as excessive and instead adopted 7.6 as the appropriate WACC.[2] More important, however, the Commission also rejected the concept of using the WACC as the FVROR. As the Commission concluded,

> [t]he *rate of return methodology* and resulting revenue increase proposed by Chaparral City would produce an excessive return on FVRB.[3]

B. <u>In Decision No. 68176, The Commission Recognized That The WACC Should Not Be Adopted As The FVROR And That An Adjustment To The WACC Is Necessary In Order To Arrive At Just And Reasonable Rates.</u>

The Commission adopted 7.6 percent as the WACC and concluded that the 7.6 percent WACC translates into a 6.36 percent FVROR on FVRB.[4] The concept of a downward adjustment to the WACC for application to a FVRB is consistent with established theories of finance. *See* Exh. S-R2. In Decision No. 68176, the Commission accomplished this downward adjustment by using a method that it has relied on repeatedly to adjust the WACC: the so-called "backing-in" method. *See Litchfield Park v. Arizona Corp. Comm'n*, 178 Ariz. 431, 435, 874 P.2d 988, 992 (App. 1994). The Court of Appeals ultimately determined that the "backing-in" method is not consistent with the Arizona Constitution and criticized it as a "superfluous mathematical exercise." *Chaparral City v. Arizona Corp. Comm'n*, 1 CA-CC 05-0002, at 14, ¶ 17 (Ariz. App. 2007) (Unpublished). Nonetheless, the court did not prescribe any particular method by which the Commission must determine the Company's FVROR.

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[1] Exh. A-R6 at 16:10-11.
[2] *Id.* at 16:27-28.
[3] *Id.* (emphasis added).
[4] Exh. A-R6 at 28.

C. Although The Court Of Appeals Criticized The "Backing-In" Method, It Recognized That It Falls To The Commission To Determine An Appropriate FVROR.

Significantly, the Court of Appeals expressly recognized that the Commission is not required to adopt the WACC as the FVROR:

> If the Commission determines that the cost of capital analysis is not the appropriate methodology to determine the rate of return to be applied to the FVRB, the Commission has the discretion to determine the appropriate methodology.[5]

Furthermore, the court did not in any way criticize the Commission's conclusion that the Company's proposed methodology would result in an excessive return on FVRB, nor did it criticize the Commission's determination that it is necessary to adjust—or translate—the WACC in order to determine an appropriate FVROR.

The court's determination was limited to a criticism of *how* the Commission calculated its adjustment to the WACC—not *whether* the Commission may undertake such an adjustment. At this point in these proceedings, then, the question becomes *how* to determine the appropriate downward adjustment, not *whether* to undertake such an adjustment.

D. The Issue Before The Commission In This Remand Proceeding Is How To Appropriately Adjust The WACC In Order To Arrive At An Appropriate FVROR.

Staff has offered two proposals in this proceeding: the first results in a FVROR of 6.34 percent and the second, in a FVROR of 6.54 percent.[6] RUCO has suggested a FVROR of 5.6 percent.[7] Each of the Staff and RUCO witnesses sets forth various proposals for appropriately adjusting the WACC for application to a FVRB. Although the methods underlying these proposals differ, they all begin with the premise that the WACC must be adjusted downward for application to a FVRB. This is consistent with established principles of financial theory:

> It is clear that the cost of capital will differ from the fair rate of return if

[5] *Chaparral City* at 13, ¶ 17.
[6] Exh. R-S5 at 6, 9.
[7] Exh. R-R1 at 40.

> the definition of rate base is not consistent with the definition of total capital used in calculating the cost of capital. The fair rate of return will vary, depending upon the method used in calculating the rate base. If an original cost rate base is used, the fair rate of return will equal the weighted average cost of the utility's cost of debt, preferred stock, and equity, with each of these cost rates being calculated on the basis of original cost. Conversely, in order for the utility to be given an opportunity to earn the same dollar cost of capital from a fair value rate base, the appropriate fair return will differ from that which would be applied to an original cost rate base.[8]

The Company suggests that the Commission adopt the WACC determined in Decision No. 68176, without adjustment, as the FVROR. In its testimony, the Company discusses at length its rationale for using the WACC as the FVROR.[9] The Company's proposal, however, cannot be reconciled with the Commission's previous decision or the Court of Appeals' decision. Specifically, the Commission has *already determined* that the Company's proposed methodology will lead to excessive returns, Exh. A-R6 at 27-28, and the Court of Appeals has neither criticized that specific conclusion nor required the Commission to undertake any specific methodology when determining the fair value rate of return.[10] In light of the Commission's previous determination, the Company's testimony is largely irrelevant and is certainly not aimed at assisting the Commission in developing a method for adjusting the WACC that will both comport with the Arizona Constitution and lead to a reasonable return.

The Company points out that the Court of Appeals' decision vacated Decision No. 68176, thereby arguably vacating all the Commission's findings, including the conclusion that the Company's proposed FVROR methodology will lead to excessive returns.[11] The Company's approach to this remand proceeding, however, would appear to undermine this argument. For example, the Company initially chose to forego filing testimony, electing instead to file only schedules based on the assertion that the issues on remand were narrow. Exh. A-R3 at 5, 11. Furthermore, the Company has not readdressed in the remand proceeding the host of issues disposed of by Decision No. 68176, nor has

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[8] Exh. S-R2 at 32.
[9] *See generally* Exh. A-R7.
[10] *Chaparral City* at 13, ¶ 17.
[11] Tr. at 232-38.

it sought any special dispensation by the Commission to continue to charge the rates authorized by that decision. *See* Tr. at 260-61. These actions by the Company serve as an implicit recognition that the portions of Decision No. 68176 that were not criticized by the Court of Appeals remain, for all practical purposes, undisturbed. Accordingly, there is no reason for the Commission to reconsider all of its previous findings, including the conclusion that the Company's proposed methodology for determining FVROR will lead to excessive rates.

II. IN THIS PROCEEDING, THE COMMISSION SHOULD ADOPT A FVROR THAT FALLS BETWEEN 6.34-6.54 PERCENT.

Staff has recommended two methodologies for the Commission's consideration in this matter: the first results in a FVROR of 6.34 percent, and the second results in a FVROR of 6.54 percent.

The analysis underlying both alternatives begins with the recognition that a WACC developed for application to an original cost rate base ("OCRB") should not be applied to a FVRB.[12] The WACC is specifically designed to apply to an OCRB. *Id.* This is the case because the WACC "is derived from the liabilities/owners' equity side of the balance sheet using the book values of the capital structure components." *Id.* The WACC is then applied to the rate base, which is derived from the asset side of the balance sheet, i.e., the OCRB. *Id.* As Staff witness Parcell stated in his direct testimony,

> [f]rom a financial perspective, the rationale for this relationship is that the rate base is financed by the capitalization. Under this relationship, a provision is provided for investors (both lenders and owners) to receive a return on their invested capital. Such a relationship is meaningful as long as the cost of capital is applied to the original cost (i.e., book value) rate base, because there is a matching of rate base and capitalization.[13]

Applying the WACC to the FVRB, as the Company proposes, breaks the link between OCRB and WACC. *Id.* Again, as Staff witness Parcell has stated,

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[12] Exh. S-R5 at 4..
[13] *Id.*

> [t]he amount of fair value rate base that exceeds original cost rate base is not financed with investor-supplied funds and, indeed, is not financed at all. As a result, a customary cost of capital analysis cannot be automatically applied to the fair value rate base since there is no financial link between the two concepts.[14]

Staff witness Parcell recommended modifying the WACC, through the capital structure, to recognize the "Fair Value Increment," i.e., that difference between the FVRB and the OCRB that is not financed with investor-supplied funds.[15] By identifying this "Fair Value Increment," Staff was able to suggest a "fair value capital structure" by which to then determine the FVROR.

A. Staff's First Alternative.

Because the Fair Value Increment is not financed with investor-supplied funds, it is logical and appropriate from a financial standpoint to assume that the Fair Value Increment has no financing cost. Exh. S-R5 at 5. Staff's first alternative therefore applies a zero cost-rate to the Fair Value Increment. *Id.* at 5-6.

The Company argues that the Staff's first alternative produces results that are identical to the "backing-in" method and that the Commission should therefore reject it. Staff acknowledges that, in the context of this remand proceeding, the first alternative produces the same result in an algebraic sense as the "backing-in" method. *See* Exh. A-R14. However, this does not mean that the two methods will always produce identical results. Additional interactive impacts of Staff's first alternative for determining the FVROR on other elements of the revenue requirements model may well cause additional differences. *Id.* Furthermore, as a practical matter, when normal rounding of numbers is applied in the context of calculating a utility's revenue requirement, the results of Staff's first alternative and the "backing-in" method will not always be identical. *Id.* The testing that Staff has performed, examples of which are attached to Staff's surrebuttal testimony, shows that differences in result occurred and, in some instances, were quite substantial. *Id.*

Despite the conclusion that, within the context of this case, Staff's first alternative produces the same result algebraically as the "backing-in" method, Staff's first alternative still deserves the Commission's consideration. *Id.* As Staff witness Parcell stated,

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[14] *Id.*
[15] *Id.* at 5.

> [f]rom a financial and economic perspective, it does not matter whether the ratemaking impact of using Staff's first alternative is nearly the same, or even exactly the same, as the "backing-in" method. Chaparral City seems to conclude that these nearly identical results mean that Staff's first alternative is a superfluous mathematical exercise, as the court used that terms in the *Chaparral City* case. I do not agree with this conclusion because Staff's first alternative expressly considers how to independently calculate and determine the FVROR. By contrast, my understanding, from a non-legal perspective, is that the court in the *Chaparral* City case perceived the Commission to be determining rates by using an OCRB, and then determining the FVROR as a fall-out number, i.e., without any independent analysis. This is not the case with either of Staff's proposals.[16]

For the reasons stated in the direct and surrebuttal testimony of Staff witness Parcell, Staff's first alternative is supported by established principles of economics and finance and is therefore an appropriate method for determining the Company's FVROR. *See* Exh. S-R5 at 4-6.

B. <u>Staff's Second Alternative.</u>

If the Commission were to determine that it is appropriate to apply a return greater than zero to the Fair Value Increment, the proper cost-rate should be no larger than the *real risk-free rate of return*. *Id.* at 7. For purposes of this analysis, Staff determined the real risk-free rate of return to be 2.5 percent. *Id.* at 8.

In financial terms, a risk-free return is a return on an investment that carries little or no risk. *Id.* at 7. Risk-free investments are universally defined as United States Treasury Securities, and short-term maturities are usually used as the risk-free rate. *Id.* Based upon both recent historical yields and forecaseted yields for United States Treasury Securities, Staff used 5.0 percent as the nominal risk-free rate. *Id.*

The *real* risk-free rate is simply the nominal risk-free rate less inflation. *Id.* For purposes of developing a cost-rate for the Fair Value Increment, it is important to use the real risk-free rate, as opposed to the nominal risk-free rate, because the Fair Value Increment already incorporates inflation. *Id.* at 8. Based upon the Consumer Price Index ("CPI") for 2006 and forecasts of the CPI

[16] Tr. at 340-41.

for 2007-08, Staff used 2.5 percent as the inflation rate. *Id.* Staff then computed a real risk-free rate of 2.5 percent (5 percent – 2.5 percent = 2.5 percent). *Id.*

For its alternative recommendation for the Company's fair value rate of return, Staff developed a range for the Fair Value Increment with a maximum of 2.5 percent and a minimum of zero. *Id.* at 8-9). Staff then chose the midpoint of that range (1.25 percent) as its proposal. *Id.* As Staff witness Parcell stated,

> [t]his Fair Value Increment return is in addition to the return that the Company's investors already earn on their investment in the Company. In this sense, an above-zero cost rate for the fair value increment represents a bonus to the Company that would have to find its justification in policy considerations instead of in pure economic or financial principles; for that reason, the selection of an appropriate cost rate within this range should fall to the Commission's discretion.

Id.

III. RELEVANT CASE-LAW SUPPORTS STAFF'S PROPOSALS.

In this proceeding, the Company has often referred to the following quotation from *Arizona Corp. Comm'n v. Arizona Water Co.,* 85 Ariz. 198, 203, 335 P.2d 412, 415 (1959):

> The amount of capital invested is immaterial. Under the law of fair value a utility is not entitled to fair return on its investment; it is entitled to a fair return on the fair value of its properties devoted to the public use, no more and no less. It has been stated that under this test it makes no difference whether the utility 'bought it, received it as a gift, or won it in a lottery.

(quoting *Peoples Natural Gas Co. v. Pennsylvania Public Util. Comm'n,* 153 PaSuper. 475, 34 A.2d 375, 381 (1943)). The issue in the *Arizona Water* case, however, was how to determine an appropriate FVRB. By contrast, the issue in this proceeding is how to determine an appropriate FVROR. Although Arizona cases do not specifically address this question, cases from other jurisdictions support the approach that Staff has proposed.

In *Re Harbour Water Corporation,*[17] the Indiana Utility Regulatory Commission ("IURC") described the problems associated with determining a FVROR:

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[17] *Re Harbour Water Corporation*, 2001 WL 170550 (Ind. U.R.C.), (unpublished).

> As the Commission has frequently noted, the capital structure is related to the book value of utility property. Therefore, the cost of capital calculated in the manner above, is related primarily to an original cost depreciated rate base. If the fair value rate base reflects the current value of Petitioner's utility property, as it must, determining a fair return by multiplying the cost of capital, including a consideration of prospective inflation by a fair value rate base, which includes historic inflation, *may overstate the required return by reflecting inflation twice. In order to avoid any such redundancy, it is necessary to make an adjustment to the cost of capital in arriving at a reasonable rate of return to be applied to the fair value rate base.* On the basis of the evidence presented, the Commission finds the prospective rate of inflation, 2.5% should be removed form Petitioner's 12.0% cost of equity, *to arrive at a deflated cost of common equity capital* of (9.5%) to be used in computing a fair rate of return on the fair value of Petitioner's utility property. When this is done, the resulting rate of return, which we find should be applied to Petitioner's fair value rate base of $10,700,000, is 6.10%.[18]

In two decisions issued on the same day, the Supreme Court of North Carolina also addressed these issues. In *State of North Carolina ex rel. Utilities Commission et al. v. Duke Power Co.*, the North Carolina Supreme Court concluded that "[the] computation of the cost of capital *must be adjusted* by the Commission in order to take into account the effect of the fair value increment on the fair rate of return."[19] In construing a state statute, the Court further determined that the fair value increment must be added to the equity portion of a utility's capital structure.[20] However, the court held that inclusion of the fair value increment in the capital structure should reduce the overall rate of return. The court recognized that the fair value increment "is an unrealized paper profit to the utility."[21] The court provided the following analysis:

> This is not to say that the Commission must now revise its order so as to permit Duke to make an additional increase of its rates sufficient to yield additional net income equal to 11 per cent[22] of the fair value increment. It is for the Commission, not this Court, to determine what is a fair rate of return. . . .

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[18] *Id.* at 10 (emphasis added).
[19] *State of North Carolina ex rel. Utilities Commission v. Duke Power Co.*, 285 N.C. 377, 397, 206 S.E.2d 269, 294 (N.C. 1974)(emphasis added).
[20] *Id.* at 392, 206 S.E.2d at 279-80.
[21] *Id.*at 393, 206 S.E. 2d at 280.
[22] The 11% was the rate of return based on OCRB.

> [T]he capital structure of the company is a major factor in the determination of what is a fair rate of return for the company upon its properties. There are, at least, two reasons why the addition of the fair value increment to the actual capital structure of the company tends to reduce the fair rate of return as computed on the actual capital structure. First, treating this increment as if it were an actual addition to the equity capital of the company. . . . enlarges the equity component *so that the risk of the investor in common stock is reduced.* Second, the assurance that, year by year, in times of inflation, the fair value of the existing properties will rise, and the resulting increment will be added to the rate base so as to increase earnings allowable in the future, *gives to the investor in the company's common stock an assurance of growth of dollar earnings per share, over and above the growth incident to the reinvestment in the business of the company's actual retained earnings.* As indicated by the testimony of all of the expert witnesses. . . this expectation of growth in earnings is an important part of their computations of the present cost of capital to the company. When these matters are properly taken into account, the commission may, in its own expert judgment, find that a fair rate of return on equity capital in a fair value state, such as North Carolina, is presently less than 11 per cent.[23]

In *State of North Carolina ex rel. Utilities Commission et al. v. Virginia Electric and Power*, the North Carolina Supreme Court further discussed the concepts related to determining a fair value rate of return. The court held that "[t]he Commission may, in its own expert judgment, find that a fair rate of return on Vepco's equity capital, including the fair value increment, is less than 12 per cent (the rate of return it found fair without taking the fair value increment into account). How much less, if any, is for the Commission, not for this Court, to determine."[24]

All of these authorities recognize that a WACC should not be applied, without adjustment, to a FVRB. Modern financial models, such as the Discounted Cash Flow Model ("DCF") and the Capital Asset Pricing Model ("CAPM"), already account for investor expectations that are related to increases in the value of the utility's assets.[25] Therefore, applying a cost of capital derived from modern financial models directly to a FVRB creates redundancies and double counting, thereby leading to excessive and unreasonable rates. The adjustments to the WACC that Staff has recommended appropriately address the mismatch between the WACC and the FVRB.

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[23] *Duke Power*, 285 N.C. at 396, 206 S.E. 2d at 282 (emphasis added).
[24] *Id.* at 413, 206 S.E.2d at 295.
[25] *See* Exh. S-R8, Tab 3 at 314 (Cost of capital is synonymous with investor expected return); See also R-R1 at 17.

IV. THE EVIDENCE PRESENTED IN THIS CASE PROVIDES AN OPPORTUNITY FOR THE COMMISSION TO APPLY ITS EXPERTISE AND DETERMINE AN APPROPRIATE FVROR FOR THE COMPANY.

In this case, the Commission has been presented with a number of alternative methods for determining the Company's FVROR. RUCO, for example, adjusted the WACC by removing an inflation factor, thereby arriving at a recommendation of 5.6. Staff's first alternative, which uses a zero cost-rate for the Fair Value Increment, arrives at a recommendation of 6.34 percent. Staff's second alternative, which develops a non-zero cost-rate for the Fair Value Increment, arrives at a recommendation of 6.54 percent.[26] In addition, the record also contains testimony related to FERC's method for determining a FVROR. For oil pipelines, FERC adjusts the cost of equity estimate for inflation. Tr. at 203. Applying this kind of adjustment to the WACC in the present case yields a FVROR of 4.28. Tr. at 162-64.

It may be helpful to consider these various recommendations by considering the nature of the inquiry underlying the determination of a FVROR. As Staff witness Parcell stated,

> [t]his is a process that requires the exercise of judgment. It is therefore more akin to estimating the cost of equity than it is to ascertaining the cost of debt. Furthermore, certain aspects of the process for estimating the cost of equity are relatively well established in financial theory. No such similar parallel exists for determining the fair value rate of return. This is why Staff has proposed two alternative calculations for the fair value rate of return in this proceeding, i.e., to provide the Commission with a sense of the range for the fair value rate of return that is appropriate in this case.[27]

In determining an appropriate FVROR for Chaparral City, the Commission may consider all of the available evidence and may use its expertise to reconcile the evidence and develop a reasonable resolution. In other words, the Commission is not bound to adopt the specific recommendation of any particular expert, but instead may use its expertise to synthesize the evidence and arrive at a reasoned policy judgment. *See Maine v. Norton,* 257 F.Supp.2d 357, 389 (D. Me. 2003); *Citizens*

[26] Staff's second alternative uses 1.25 percent as the cost-rate for the Fair Value Increment. This 1.25 percent is the mid-point of a range wherein the real risk-free rate is the maximum cost-rate for the Fair Value Increment and zero is the minimum cost-rate Conceptually, the Commission could use any point within that range as the cost-rate for the Fair Value Increment.

[27] Exh. S-R6 at 21.

Tel. Co. v. Public Service Comm'n of Kentucky, 247 S.W.2d 510, 514 (1952).

V. THE COMMISSION SHOULD DENY THE COMPANY'S REQUEST FOR ADDITIONAL RATE CASE EXPENSE.

Staff opposes the Company's request to recover an additional $100,000 of rate case expense.[28] The Company is already recovering a normalized level of reasonable and prudent rate case expense through the rates that the Commission established in Decision No. 68176.[29] Staff therefore views the additional rate case expense that the Company has requested as being in excess of a normalized level of reasonable and prudently incurred costs.[30]

In addition, A.R.S. § 12-348 prohibits the Company from recovering attorneys' fees in a court action that challenges rates established by the Commission. The bulk of the additional rate case expense that the Company seeks to recover is related to the costs of its appeal. The Commission, through the exercise of its exclusive ratemaking authority, may certainly allow the Company to recover such additional rate case expense if it chooses. Nonetheless, such a result would appear to frustrate the legislative policy prohibiting such recovery as expressed in A.R.S. § 12.348.

VI. CONCLUSION.

Staff recommends that the Commission adopt Staff's first alternative of 6.34 percent as the Company's FVROR. Alternatively, Staff recommends that the Commission adopt its second alternative of 6.54 percent if the Commission elects to adopt a non-zero cost-rate for the Fair Value Increment. Finally, Staff recommends that the Commission reject the Company's request to recover additional rate case expense.

RESPECTFULLY submitted this 5th day of March, 2008.

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[28] Exh. S-R3 at 18.
[29] *Id.* at 20-21.
[30] *See* Tr. at 268-69.

Original and thirteen (13) copies of the foregoing were filed this 5th day of March, 2008 with:

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